
News@Math&Stat

*Department of Mathematics and Statistics
University of Maryland, Baltimore County*

1000 Hilltop Circle, Baltimore, MD 21250, 410-455-2412, www.math.umbc.edu

Fall 2008, Volume 3, Issue 2, Editor: Matthias K. Gobbert, gobbert@math.umbc.edu

UMBC
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Welcome by Department Chair Nagaraj K. Neerchal

Welcome to the Fall 2008 issue of our department's newsletter. In this issue we introduce to you our newest faculty **Brad Percy** and announce the founding of a student chapter of the Society for Industrial and Applied Mathematics (SIAM), the premier professional society for applied and computational mathematics. We are very excited that we have begun recruiting for the Biostatistics track in our Statistics Ph.D. program, offered in collaboration with University of Maryland, Baltimore. We also report on a very successful 2nd Annual Probability & Statistics Day at UMBC held in April. Of course, we would love to hear from you!



New Biostatistics Track in the Statistics Ph.D. Program

The statistics program at UMBC is happy to announce the addition of a **Biostatistics Track** to the existing statistics Ph.D. program. The biostatistics track will provide solid training in the theory of probability and statistics/biostatistics through courses at UMBC and will offer hands-on experience in collaborative research at the School of Medicine, UMB and the Greenebaum Cancer Center. Given the popularity of biostatistics as a profession, we expect the enrolment in this new exciting track to be high. A webpage containing all the details about biostatistics at UMBC/UMB will be available shortly at www.math.umbc.edu. Direct questions to biostat@lists.umbc.edu.

SIAM Student Chapter Founded by President Alen Agheksanterian



The Board of Trustees of the Society for Industrial and Applied Mathematics (SIAM) has formally recognized the UMBC SIAM student chapter this Fall (see <http://www.siam.org/students/chapters/current/umbc.php>). The SIAM student chapter provides a forum for discussion and promotion of research in applied mathematics and the computational sciences. Specific activities planned for this year include career sessions for graduate students in the department, an invitation for a SIAM distinguished lecturer to speak at UMBC, as well as a field trip for graduate students to attend the Joint Mathematics Meeting this January in Washington DC. The chapter officers for 2008-2009 are **Alen Agheksanterian** (President), **Noemi Zakarias** (Vice President), **Kristel Ehrhardt** (Secretary), **Morgin Jones** (Treasurer), and **Philip Nelson** (Webmaster). The faculty advisor for the chapter is **Dr. Susan Minkoff**.

New Faculty: Bradford Percy

Bradford Percy joined the department this Fall following graduation from the University of Utah in 2003, a VIGRE post-doctoral position in Rice University's Computational and Applied Mathematics Department, and most recently, a two-year position as a Research Fellow at the Laboratory of Biological Modeling at the National Institutes of Health. His research focuses on the study of longer time scale modification of excitable media, specifically dynamics of long term adaptation of neurons, and mechanisms of pancreatic beta cell biogenesis for diabetes control.



News from the Graduate Program by Graduate Directors Kathleen Hoffman and Anindya Roy

Greetings from the new Graduate Program Directors: Dr. Kathleen Hoffman for Applied Mathematics and Dr. Anindya Roy for Statistics. Many thanks and appreciation to Dr. Seetharam Gowda for doing such a great job with the graduate program in the past several years! We welcome 22 new top-notch domestic and international students this Fall and congratulate all May 2008 graduates: **Filiz Gurtuna**, Ph.D. – Mathematics (Dr. Guler), **Ana Maria Soane**, Ph.D. – Mathematics (Dr. Rostamian), **Shi Li**, M.S. – Mathematics, **Jia Liu**, M.S. – Statistics, **Willy Weng**, M.S. – Statistics, and August 2008 graduates: **Sean Griffith**, M.S. – Mathematics (Dr. Minkoff) and **Bruno Kamdem**, M.S. – Mathematics (Dr. Shen). We are also happy to announce that **Alen Agheksanterian**, **Martin Klein**, **Justin Newcomer**, **Adrian Vancea**, **Yukun Wu**, and **Noemi Zakarias** have successfully completed their oral exams and have become candidates for the Ph.D. degree. We look forward to a productive and exciting academic year.



News from the Undergraduate Program by Undergraduate Advisor Yoon Song

In May 2008, 34 students graduated with Bachelor's degree in Mathematics: three students with Departmental Honors (**Edward Phillip**, **Austin Rochford**, and **Yuriy Sverchkov**) and 14 students with University Honors (8 Summa Cum Laude, 6 Magna Cum Laude, 4 Cum Laude). The four finalists for Valedictorian of the May 2008 graduating class from the College of Natural and Mathematical Sciences included three Mathematics majors (**Michael Atamas**, **Philip Graff**, **Clare Wickman**). We also had one B.S. in Statistics. Additionally, nine students graduated with a Mathematics minor and four with a Statistics minor. In August 2008, four students graduated with Bachelor's degree in Mathematics. Currently, we have 294 Mathematics majors and minors (228 majors/66 minors) and 15 Statistics majors and minors (10 majors and 5 minors).



News from the MSGSA by President Martin Klein

The Mathematics and Statistics Graduate Student Association (MSGSA) held successful elections last November in order to select the officers for 2008. The MSGSA will hold its annual elections in November. The current officers are **Martin Klein** (President), **Alen Agheksanterian** (Vice President), **Elizabeth Stanwyck** (Treasurer), **Deepak Ayyala** (Secretary), and **Gaurav Sharma** (Senator). For more information please refer to our website, orgs.umbc.edu/msgsa.

News from the Council of Majors and Pi Mu Epsilon by President Aaron B. Pearlman

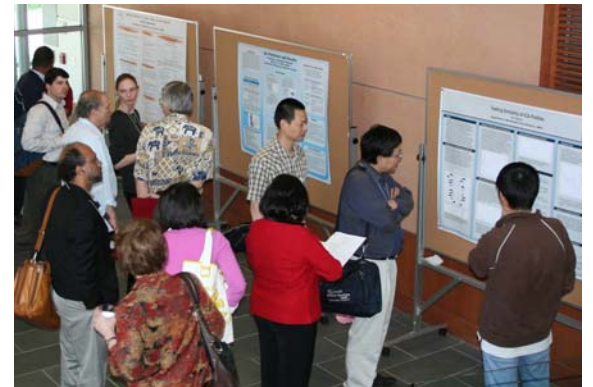
The Pi Mu Epsilon Honors Society is involved in many exciting activities this upcoming year! In a ceremony attended by UMBC **President Freeman Hrabowski**, we inducted twelve new members into Pi Mu Epsilon in May, eight of whom are pictured. We continue to provide free tutoring in the Math Lounge every Friday from 12:00-1:00 P.M. for undergraduates taking Math 301, the cornerstone mathematical analysis course. Additionally, the Council of Majors and Pi Mu Epsilon are planning to participate in Pi Day this upcoming March with the Society of Physics Students and Sigma Pi Sigma. The other officers this year are **Michelle Stegman** (Vice President), **Kimberly Shurupoff** (Treasurer), and **Matthew Chaloux** (Secretary).





2nd Annual Probability & Statistics Day at UMBC

The Department of Mathematics & Statistics at the UMBC organized its 2nd Annual Probability & Statistics Day during April 25-26, 2008. Organized by the statistics faculty and chaired by **Dr. Bimal Sinha** (Presidential Research Professor), the conference began on Friday afternoon with a workshop on small area estimation offered by **Dr. Malay Ghosh**, distinguished professor at the University of Florida. Saturday's conference started with two plenary lectures by **Dr. Robert Bell** from AT&T and **Dr. Lynne Stokes** from Southern Methodist University, followed by a series of invited presentations by several of UMBC's distinguished alumni (**Dr. Dulal Bhaumik** from UIC, **Dr. Michael Baron** from UT Dalls, **Dr. Manoj Sharma** from LifeScan, **Dr. Kevin Drummey** from NSA, **Dr. Nabendu Pal** from University of Louisiana, to name a few) and some renowned statisticians from universities across the country (**Dr. Sanat Sarkar** from Temple, **Dr. Gauri Sankar Datta** from University of Georgia, **Dr. Tapan Nayak** from George Washington, **Dr. Subhash Bagui** from University of Florida, **Dr. Rajesh Ranjan Nandy** from UCLA, **Dr. James Spall** from Johns Hopkins/Applied Physics Lab, **Dr. Ming Tan** from UM, Baltimore). A special attraction of the Prob/Stat Day was oral and poster presentations by graduate students and recognition of best oral and poster presentations through cash awards and certificates. The conference formally ended with a plenary lecture by **Dr. Malay Ghosh** and a highly entertaining dinner banquet speech by **Dr. Barry Nussbaum**, EPA's chief statistician. The conference was primarily funded by NSA with some support from UMBC and the Maryland chapter of the American Statistical Association (ASA).



Awards for Members of the Department

Several awards were recently received by several members of our Statistics faculty: **Andrew Rukhin** (with Bill Strawderman, Rutgers) received the Youden Award in InterLaboratory Testing in recognition of their paper, "Statistical Aspects of Linkage Analysis in Interlaboratory Studies," published in the Journal of Statistical Planning and Inference in 2007. **Nagaraj K. Neerchal** received the award for "Outstanding Service to the Local Chapter" for promoting statistics in the Mid-Atlantic region from the Council of Chapters of the American Statistical Association. **Anindya Roy** won this year's "Young Researcher Award" from the International Indian Statistical Association. The award citation reads "for outstanding theoretical work in the areas of time series analysis, Bayesian nonparametrics, generalized inference, and bioinformatics, with substantive applications." Additionally, **Dulal K. Bhaumik** (the first Ph.D. student of **Thomas Mathew** at UMBC) has been elected Fellow of the American Statistical Association.

CIRC Uses Inaugural Kauffman Foundation Innovation Grant to Develop Marketing Plan

The mission of the Center for Interdisciplinary Research and Consulting (CIRC) in the Department of Mathematics and Statistics is to make the expertise of the department's faculty and students available to the community. CIRC was among the inaugural recipients of the Kauffman Foundation Innovation Grants awarded through the Alex. Brown Center for Entrepreneurship at UMBC (www.umbc.edu/entrepreneurship/innovation_grants.html). The \$5,000 support was used over the summer to involve graduate students **Yushu Yang** and **Guan Wang** in the development of a marketing plan to expand CIRC's client base off campus, including local industry and government agencies. In the department, CIRC staff **Justin Newcomer** and



Nagaraj Neerchal helped support the REU Summer Program in Computational Biology (PIs **Jonathan Bell** and **Anindya Roy**). The photo shows the CIRC crew with new **Provost Elliot Hirshman** visiting the CIRC Social Hour in the department on October 31, 2008. On campus, CIRC continues its cooperation with the Office of Information Technology by offering weekly hands-on software workshops in instructional computer labs. The offerings are being expanded with a tutorial on Excel for Data Analysis. Additionally, CIRC co-sponsored a workshop on Mathematica held by Wolfram Research. The students involved this semester are **Guan Wang**, **Justin Newcomer**, **Yukun Wu**, **Xiaoshu Feng**, **Neeraj Sharma**, **Navneet C. Sushon**, and **Xiaoyu Dong**. For more information on CIRC or to request services, visit our webpage at www.umbc.edu/circ.

Outreach Activities by Manil Suri

Professor Manil Suri's YouTube video, "Taming Infinity" is being shown at Le Laboratoire, a science and art museum in Paris, through Jan 12, 2009. He recently gave an invited address at the "Innovation 2008 Conference," Humphrey Institute, University of Minnesota - an effort to influence future science policy set by the two presidential candidates. He was the keynote speaker at the fall conference of the Community Colleges Humanities Association, where he spoke on the connection between mathematics and fiction (a talk also delivered at the Maryland Science Center). This past July, he conducted a week-long STEM workshop for teachers of the Baltimore County Public School System on how to motivate mathematical topics using an integrated approach.

Kudos

- Congratulations to **Muruhan Rathinam** (photo) for his promotion to Associate Professor!
- New grants awarded in the department include two from the National Science Foundation (NSF) to **Xiao Wang** and to **Anindya Roy** and two contracts from the U.S. Environmental Protection Agency to **Nagaraj K. Neerchal** and to **Bimal Sinha**. We also received REU supplements to NSF grants of **Kathleen Hoffman** and to **Susan Minkoff**. Also, two substantial equipment grants totaling over \$200,000 towards the extension of the UMBC High Performance Computing Facility (HPCF; www.umbc.edu/hpcf) come also from the NSF through the MRI and the SCREMS programs, with PI **Matthias K. Gobbert** and participation of **Andrei Draganescu**, **Florian Potra**, **Nagaraj K. Neerchal**, and **John Zweck** from the department. Finally, the 2nd Annual Probability & Statistics Day at UMBC was again supported by a grant from the National Security Agency. A team led by **Nagaraj K. Neerchal** (with J. Singer and J. Zengle) landed a five-year NSF grant (\$750,000) for funding scholarships for students pursuing a career in secondary education.
- **Nagaraj K. Neerchal** (with Uri Tasch) filed a patent disclosure titled "Lameness Detection of lameness using nonlinear transformations of limb movement variables."
- Professor of Statistics **Bimal K. Sinha** just published his fourth book entitled "Statistical Meta-Analysis with Applications."

